

CAPITAL IMPROVEMENT PLAN

2016 – 2020

Generation fund

OBJECTIVES OF THE CAPITAL IMPROVEMENT PLAN

Identify Needs

Prioritize
Needs

Balance Needs
with Revenues

GOALS OF THE CAPITAL IMPROVEMENT PLAN

Protect
investments
previously made

Develop greater
efficiencies

Enhance quality
of life

Contents of this report:

The City Council and staff have completed a detailed examination of the most pressing needs of the community and the forecasted revenue streams of the City.

This report outlines several decision points and recommendations to balance current and future needs of the community and the revenue sources available.

Results:

Aging infrastructure will be restored and the community will have built a higher quality of life for residents. The capacity of infrastructure will have expanded to accommodate a growing population which will expand the economic base.

In completing this analysis, three specific funds were reviewed:

- The Capital Improvement Fund
(funded with 42.5% of the City's 2% Sales Tax revenue)
- The Sanitary Sewer Fund
(funded with monthly Sewer Utility Charges)
- The Water Fund
(funded with monthly Water Utility Charges)

Each fund has specific funding sources and specific objectives. As such, the proposed projects and funding strategy for each fund is identified separately within this report.

THE CAPITAL IMPROVEMENT FUND

- ✖ 85% of the second penny sales tax
- ✖ + Revenue from Rally sources (H-D Rally Point and lease revenues from vendors previously renting 2nd Street

Used for:

Roads	Bridges
Parks	Community Center
Storm Water	Municipal Buildings

The Capital Improvement Fund was previously used to repay the City's 2008 General Obligation Bond.

This bond was a restructuring of previous debt that was incurred with the construction of City Hall, the Library, the Community Center and the Fire/Ambulance Hall.

As a result, roads, parks and City facilities have received minimal maintenance.

Over time, this lack of maintenance has proven to be more costly than the money saved.

Over the last 3 years, the City has invested significant sums to make emergency repairs that could have been avoided.

Results of Deferred Maintenance (examples):

Community Center HVAC system, boiler, hearing system, pool room doors & windows.

All required repairs due to an inoperative venting system that was faulty from the time of construction.

Waste Water Lagoon Rip Rap.

The original construction project was over budget by \$100,000 so this critical element was deleted from the project.

The banks became seriously eroded causing the need for emergency repairs that cost approximately \$400,000 in 2015.



Deferred Maintenance Projects:

The City has identified several projects which should be completed within the next 18 months in order to avoid potential future emergency repairs:

Deferred Maintenance Project	Budgeted Cost	Year
Roofs: Library & Auditorium	\$ 200,000	2016
Storm Water on Murray and 1 st Ave.	\$ 500,000	2017
Pool Pack	\$ 250,000	2017
Otter Road - City Share	\$ 300,000	2+ yrs
Overlay Roads: Ellen, 1 st , Woodland	\$ 335,000	2017

Deferred Maintenance Projects in Murray Addition and 1st Ave.

- Roof repairs will be undertaken in the summer of 2016 in order to reduce the risk of damage to existing structures.
- Storm water projects in Murray Addition and 1st Avenue neighborhoods include adding culverts at several intersections. Murray Addition also requires redefinition of some ditch drainage areas. 1st Avenue is also in need of a detention pond. (spring 2017)

Deferred Maintenance Projects – Pool Pack

The pool pack is the venting system that was designed for the Community Center when it was built. The system has never been functional, leading to excessive humidity and corrosion causing several mechanical systems to fail.

The damaged systems have been replaced, however in order to preserve these systems, the pool pack must be replaced.
(2017)

Deferred Maintenance Projects – Roads

Otter Road was originally constructed as a county road and does not meet current City standards. Since it's incorporation into the City, this area has grown and traffic has increased.



Deferred Maintenance Projects – Roads

The roadway from Vanocker Canyon to Pine Tree Trail should be upgraded to include reconstruction and a new overlay.

Reconstruction should include curb, gutter and sidewalk.

Preliminary cost estimate = \$1,200,000.

The recommendation is for the City to work with SEDC to develop a TIF District on a portion of the Blessed Emanuel Church property. An additional \$300,000 of City funding would be required. (2+years to develop the TIF.) Construction to begin in year 3.



Deferred Maintenance Projects – Roads

Ellen, 1st and Woodland have been identified as some of the most deteriorated roads in the City.

These streets require reconstruction. (spring 2017)



Efficiency Projects

The second grouping of projects is designed to complete three significant efficiency projects for the community:

Efficiency Projects	Budgeted Cost	Year
City Hall Remodel & Safety Features	\$ 400,000	2017
City Park Remaining Homes Purchase	\$ 300,000	3+ years
Parks Dept. 80' x 100' Building	\$ 1,013,000	2019
Public Works 120' x 100' Building	\$ 1,520,000	2019

Efficiency Projects – City Hall

As life and safety incidents in public buildings have been trending upwards across the nation, it is prudent to make adjustments to enhance the safety of employees and visitors.

While adjustments are being made for improved life and safety, it is recommended that a remodel takes place. The goals are to provide more flex space for current and future staff growth and to provide more meeting space. As part of the remodel, it is recommended that a large conference room be made utilizing several smaller areas. The new space would better accommodate large community meetings.

This project would combine with capital improvement projects planned for the Library that are funded through private donations. By combining projects, cost savings can occur. (summer 2017)

Efficiency Projects – City Park Homes

There are three homes in the area of the City Park. They were once part of a larger residential area which was previously purchased by the City.

Earlier this year, the City purchased one of these homes.

The Parks Board recommends that the City purchase the remaining two. This will allow for a uniformed development. (complete within the next 3 years)



Efficiency Projects – Parks Department Building

The Parks Department is currently housed in a building which served as the City Pool locker rooms. The facility is insufficient to store maintenance vehicles and equipment. Most equipment is currently stored outside, exposing them to the elements which reduces life expectancy.

The facility is located on a parcel of property that is needed by the School District for future expansion.

It is recommended that a new Parks Department facility be built. Although a location has not been determined, site selection should take place in 2016 followed by construction in 2017.



Efficiency Projects – Public Works Building

The current Public Works campus is a mixture of dilapidated structures and storage yards. Indoor storage space is inadequate to house the specialized equipment used by the department. The lack of inside space means the expensive equipment must be stored outside in the elements which contribute to additional maintenance and depreciation. The outside storage yards are inadequate to contain all the Public Works fleet.

It is recommended that a new 120' x 100' metal structure be built to replace the existing structures. This would complement the recently constructed salt shed, the sanitation shed and the existing administration office. (see next slide for timeline)



Efficiency Projects – Parks Department and Public Works

Upon completion of the new Parks Department facility, the Public Works Department will temporarily relocate into the new parks facility while a new Public Works building is demolished and re-constructed at the current Public Works site. (2017 – 2018)

Once the new Public Works building is complete, equipment and staff from Public Works will move into the new building. The Parks Department can then move from their current building into the new Parks building. Once vacated, the School District will take possession of the old Parks facility in the first quarter of 2019.



Quality of Life Projects

The third group of projects is designed to enhance the quality of life in the Sturgis community.

Quality of Life Projects	Budgeted Cost	Year
Downtown Iconic Landmarks	\$ 400,000	2017+
9 th Street Bridge Construction	\$ 1,00,000	2018

Quality of Life – Downtown Icons

Construction of a downtown iconic landmark was first discussed as part of the Future Sturgis movement and was included in the Sturgis Comprehensive Plan.

Though an exact project has not been identified, it has been recommended that the project compliment the existing H-D Rally Point and serve as an anchor in the downtown core. Ideally, the project (splash park/restrooms/information center) would serve as another downtown destination. Discussions will take place in 2016 followed by construction in 2017 or 2018.

Note: This project is not tied in any way to the Harley-Davidson Sponsorship Agreement.

Quality of Life – 9th Street Bridge

Currently there are four crossings over Bear Butte Creek; Junction, 7th, 9th and 15th.



9th Street Bridge

Quality of Life – 9th Street Bridge

Preliminary estimate for replacement is \$1,000,000. The project would require outside engineering design in 2017 followed by construction in 2018.



Main Street Project

The last project to be funded largely through the Capital Improvement Fund.

Main Street Project	Agency
\$ 4,052,460	Heavy Contractors
\$ 25,000	Four Front Construction Admin.
\$ 19,000	Street Signs, etc.
\$ 25,000	DOT Inspections
\$ 75,000	Contingencies
\$ 4,196,460	Total Anticipated Expenses

Main Street Project	Agency
\$ 4,052,460	Heavy Contractors
\$ 25,000	Four Front Construction Admin.
\$ 19,000	Street Signs, etc.
\$ 25,000	DOT Inspections
\$ 75,000	Contingencies
\$ 4,196,460	Total Anticipated Expenses
\$ 1,000,000	DOT SIB Loan (repaid from future STIP)
\$ 850,000	STIP Balance
\$ 835,000	Water Fund
\$ 1,511,460	Cap Imp Funding (delineated below)
\$ 4,196,460	Total Existing Funding
\$ 1,235,016	Saved in Five Year Plan
\$ 276,444	Portion of Proposed Loan

Main Street Project - Funding

#1 STIP (State Transportation Improvement Plan) balance. This funding is from the Federal Highway Bill (Federal Gas Tax)
Average per year = \$160,000 - \$180,000. Current balance is \$850,000.

0% Loan from the State for \$1,000,000 (repaid through future STIP disbursements.) Paid off in 2022.
New program will allow trade-in of STIP appropriations.

Main Street Project - Funding

- #2 \$835,000 from the Water Fund.
The Main Street Project includes replacing the water main running along Main Street. The Water Fund budget has included savings from several years to fund this portion of the project.

Main Street Project - Funding

- #3 Capital Improvement Fund.
Through the 2020 Five Year Project Schedule, \$1,235,016 has been set aside for this project. The remaining \$276,444 is proposed to be funded through the proposed Capital Improvement Loan Package.

Financing of the Capital Improvement Fund Projects

The projects identified here have a combined total anticipated budget of \$6,494,444. The anticipated timeframe for the completion of all of these projects is approximately three years.

It is recommended that the financing for these projects would have as limited time as possible in order to ensure that future Councils will have the ability to complete capital projects when needed.

Recommendation - traditional bank financing

- Twenty-year repayment term
- Reduced cost of issuance
- No need for a bond reserve
- Historically low interest rates
- Draw the funds as needed – reducing monthly payments



Financing of the Capital Improvement Fund Projects – cont.

Given the historically low rates, it would be advantageous for the City to include the outstanding balance of the existing 2008 General Obligation Bonds as well as the projects identified in this report.

Refinance Capital Improvement Debt	
March 15, 2016 Principal	\$ 2,820,000
Wells CD Debt Service Balance	\$ 625,000
July 1, 2016 Funds Needed	\$ 2,195,000
Identified Capital Improvement Projects	\$ 6,494,444
Total Financing Needed on July 1, 2016	\$ 8,689,444
Annual Payments 20 years 3.5% starting in July 1, 2016	\$ 604,743

Financing – Debt Limitations

Constitutional Debt Limitations	
Current Debt Limit	\$ 10,324,606
Add back outstanding CI bonds + Interest	\$ 3,682,327
Add TIF #9 (pay off Qtr. 2 of 2016)	\$ 95,855
Less new principal & interest for 2016 projects	\$ 6,047,433
Add debt principal & interest repaid in 2016 on new loan	\$ 302,372
Remaining 2016 Availability Dec. 31, 2016	\$ 8,357,727
Add debt principal & interest repaid in 2017 on new loan	\$ 604,744
Add 2017 additional debt capacity from assessment growth	\$ 300,000
Continued..	

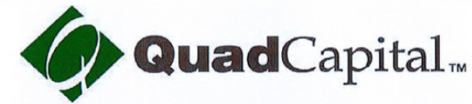
Financing – Debt Limitations continued

Constitutional Debt Limitations	
Add 2017 TIF 12 repayment	\$ 46,620
Less principal & interest for 2017 projects (50% of total issuance)	\$ 6,047,433
Remaining 2017 Availability Dec. 31, 2017	\$ 3,261,658
Add debt principal & interest repaid in 2018 on new loan	\$ 604,744
Add 2018 additional debt capacity from assessment growth	\$ 300,000
Add 2017 TIF 12 repayment	\$ 126,315
Remaining 2018 Availability Dec. 31, 2018	\$ 4,292,717

Financial Position Compared to 2008

In 2008 a \$6,500,000 bond was used to refinance previous debt incurred from the construction of the Community Center, Fire/Ambulance Hall and reconstruction of the City Hall/Library complex.

Significant improvements to the City's financial situation have occurred in the last eight years.



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Rating Agency Credit Scale

Moody's	S&P	Fitch	NAIC*	
Aaa	AAA	AAA	1	Investment Grade
Aa1	AA+	AA+	1	
Aa2	AA	AA	1	
Aa3	AA-	AA-	1	
A1	A+	A+	1	
A2	A	A	1	
A3	A-	A-	1	
Baa1	BBB+	BBB+	2	
Baa2	BBB	BBB	2	
Baa3	BBB-	BBB-	2	
Ba1	BB+	BB+	3	Non-Investment Grade
Ba2	BB	BB	3	
Ba3	BB-	BB-	3	
B1	B+	B+	3	
B2	B	B	3	
B3	B-	B-	3	

* National Association of Insurance Commissioners

Projected Cash Flow

The proposed action will still allow for annual projects beyond those identified thus far in this report.

Beginning in 2017, the City would be able to complete a larger value of projects each year than ever before.

At no time would the annual budgeted projects be less than \$700,000.

Refinancing of the existing debt into the proposed package will allow debt payments to be reduced.

The following illustrations show the projected 20-year cash flow assuming a modest sales tax annual revenue growth of 3% each year and other revenue streams remaining constant.

Projected Cash Flows

	2016	2017	2018	2019	2020	2021	2022
Starting Cash	\$615,870	\$46,825	\$82,479	\$199,600	\$438,384	\$772,769	\$1,071,139
Saved from previous years for projects	(\$562,300)						
Annual Projects	(\$757,499)	(\$848,632)	(\$872,361)	(\$754,750)	(\$707,098)	(\$792,500)	(\$900,000)
Est. Cap Imp Sales Tax Revenue	\$1,376,617	\$1,506,536	\$1,551,732	\$1,598,284	\$1,646,233	\$1,695,620	\$1,746,488
*Additional Revenue	\$205,000						
HD, 2nd Street Lease Revenue	\$230,000	\$230,000	\$230,000	\$230,000	\$230,000	\$230,000	\$230,000
HD Rally Point Great Sturgis Grant	\$25,000	\$25,000					
HD Rally Point Loan Payments	(\$230,007)	(\$230,007)	(\$230,007)	(\$230,007)	(\$230,007)	(\$230,007)	(\$230,007)
Existing GO Bond Payment	(\$553,485)						
New Loan Payments	(\$302,372)	(\$604,743)	(\$604,743)	(\$604,743)	(\$604,743)	(\$604,743)	(\$604,743)
End of Year Total	\$46,825	\$82,479	\$199,600	\$438,384	\$772,769	\$1,071,139	\$1,312,877

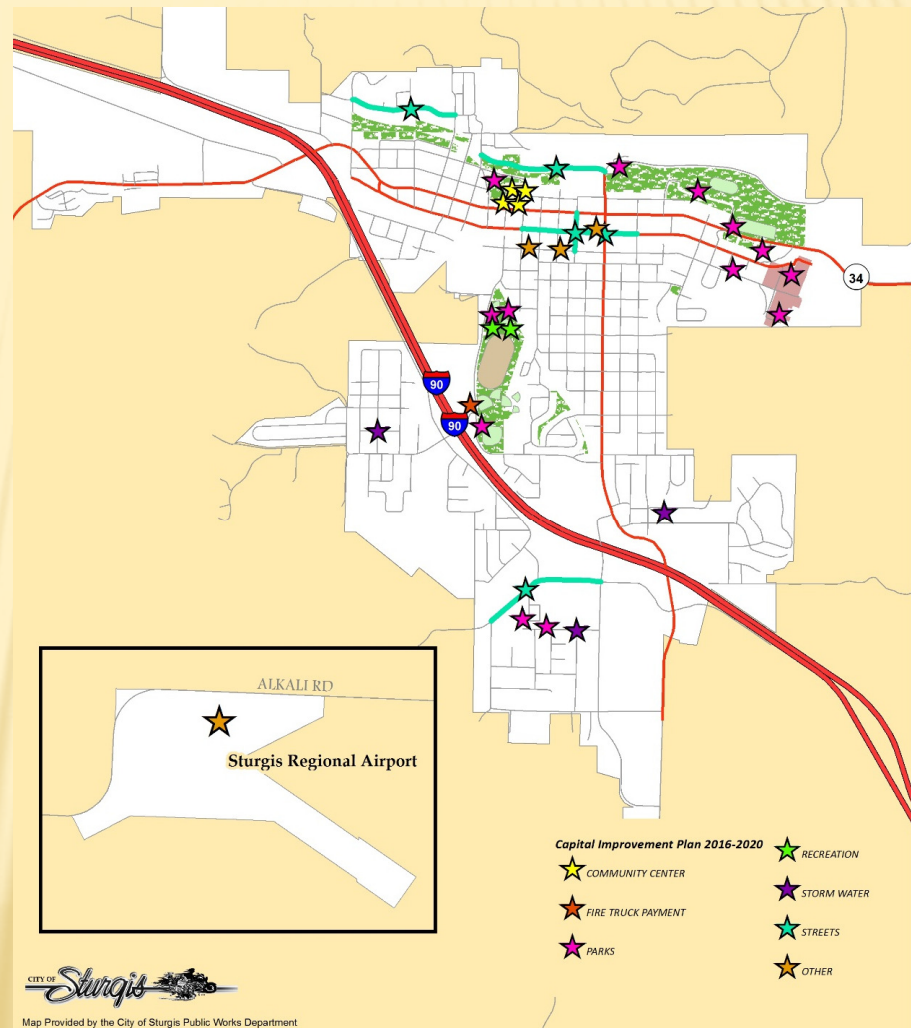
Projected Cash Flows

	2023	2024	2025	2026	2027	2028	2029
Starting Cash	\$1,312,877	\$1,669,010	\$1,679,109	\$1,744,794	\$1,767,732	\$2,079,647	\$2,252,302
Annual Projects	(\$1,000,000)	(\$1,400,000)	(\$1,400,000)	(\$1,500,000)	(\$1,500,000)	(\$1,700,000)	(\$1,700,000)
Est. Cap Imp Sales Tax Revenue	\$1,798,883	\$1,852,849	\$1,908,435	\$1,965,688	\$2,024,658	\$2,085,398	\$2,147,960
HD, 2nd Street Lease Revenue	\$230,000	\$230,000	\$230,000	\$230,000	\$230,000	\$230,000	\$230,000
STIP 90% for Streets	\$162,000	\$162,000	\$162,000	\$162,000	\$162,000	\$162,000	\$162,000
HD Rally Point Loan Payments	(\$230,007)	(\$230,007)	(\$230,007)	(\$230,007)			
New Loan Payments	(\$604,743)	(\$604,743)	(\$604,743)	(\$604,743)	(\$604,743)	(\$604,743)	(\$604,743)
End of Year Total	\$1,669,010	\$1,679,109	\$1,744,794	\$1,767,732	\$2,079,647	\$2,252,302	\$2,487,519

Projected Cash Flows

	2030	2031	2032	2033	2034	2035	2036
Starting Cash	\$2,487,519	\$2,173,659	\$1,913,765	\$1,709,457	\$1,562,402	\$1,374,317	\$1,246,972
Annual Projects	(\$1,900,000)	(\$1,900,000)	(\$1,900,000)	(\$1,900,000)	(\$2,000,000)	(\$2,000,000)	(\$2,000,000)
Est. Cap Imp Sales Tax Revenue	\$1,798,883	\$1,852,849	\$1,908,435	\$1,965,688	\$2,024,658	\$2,085,398	\$2,147,960
HD, 2nd Street Lease Revenue	\$230,000	\$230,000	\$230,000	\$230,000	\$230,000	\$230,000	\$230,000
STIP 90% for Streets	\$162,000	\$162,000	\$162,000	\$162,000	\$162,000	\$162,000	\$162,000
New Loan Payments	(\$604,743)	(\$604,743)	(\$604,743)	(\$604,743)	(\$604,743)	(\$604,743)	(\$302,372)
End of Year Total	\$2,173,659	\$1,913,765	\$1,709,457	\$1,562,402	\$1,374,317	\$1,246,972	\$1,484,560

As illustrated, the projects funded through this infrastructure plan are spread throughout the entire community and effect all municipal services.



Additional Five-Year Capital Projects

Lastly, it is proposed that the Council adopt the following five-year Capital Improvement Fund Schedule. These projects are all in addition to those identified as being funded through the proposed financing package. These projects would be funded through the remaining Capital Improvement Fund revenue.

These projects may be adjusted (moved forward or backward) based on actual sales tax receipts.

These projects will enhance the quality of life and protect the investments already made within our community.

<u>Five Year Capital Improvement Scheduling</u>						
	Saved	2016	2017	2018	2019	2020
<u>Storm Water</u>						
Projects-Anna Street	\$75,000	\$345,000				
<u>Parks</u>						
Old Stone Shelter Rebuild		\$100,000				
Girls Softball Complex Sidewalk	\$5,000					
Cemetery Chip & Seal	\$12,500					
Baseball Parking lot	\$5,500					\$75,500
Hills and Plains landscape enhancements					\$150,000	
Clark House		\$135,000				
Girls' Softball Sidewalk & Driveway	\$25,000				\$ 25,000	
Willow Park playgrounds	\$15,000					
Rose Street Park Playground						
Lion's Club Park, Storm Drain, Playgrounds					\$100,000	\$300,000
Soccer Field Concessions/RR				\$100,000		
Tennis Court resurfacing & Practice Walls					\$25,000	

<u>Five Year Capital Improvement Scheduling</u>						
Parks Continued.	Saved	2016	2017	2018	2019	2020
ADA Compliance at Sports Facilities	\$25,000				\$50,000	\$50,000
Expansion of trail/path system		\$62,500			\$75,000	
Cremain section				\$30,388		
<u>Streets</u>						
Resurface			\$125,000	\$125,000	\$125,000	\$150,000
Main Street		\$55,000	\$637,016	\$543,000		
Striping		\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
Street lighting& LED			\$6,000	\$6,000	\$6,000	\$6,000
Street Barrier Replacement					\$15,000	
City Owned Parking lot Maintenance			\$10,000	\$10,000	\$10,000	\$10,000

<u>Five Year Capital Improvement Scheduling</u>						
	Saved	2016	2017	2018	2019	2020
<u>Community Center</u>						
Pool Flooring	\$280,000					
Gymnasium Floor Resurfacing	\$100,000					
Treadmills (2)				\$12,943		\$13,732
Elliptical		\$5,000		\$2,701		\$2,866
Bikes (2)				\$8,329		
Weight Equipment		\$10,000			\$ 20,000	\$10,000
<u>Recreation</u>						
Softball Field Irrigation and Warning Track	\$9,300	\$9,579	\$9,866			
Softball Field Warning Track - Diamond Dry		\$1,620				
<u>Other</u>						
Airport Projects		\$4,800	\$10,750	\$5,000	\$3,750	\$10,000
GIS Flights and Web Hosting		\$14,000	\$14,000	\$14,000	\$14,000	\$14,000
Fire Truck Payment			\$21,000		\$21,000	
Total Annual Projects	\$562,300	\$757,499	\$848,632	\$872,361	\$654,750	\$657,098

THE SANITARY SEWER FUND

The second fund is the Sanitary Sewer Fund. This fund's sole income stream is the utility rate payers. Funds are collected and used to fund the daily operations and past debt of the fund.



Sanitary Sewer - *Projects*

There are two phases of upgrades which are presented in this plan. Each phase would be funded through its own separate financing plan.

2016 Loan Projects	Cost	Amortization	Interest	Annual Cost
Rake Screen	\$ 850,000	20 years	4.00%	\$ 61,810
High School Main Line	\$ 200,000	20 years	4.00%	\$ 14,544
Expansion Options				
Option 3 (High School, Full Throttle, Kick Start, Valley Impl.)	\$ 2,000,000	20 years	4.00%	\$ 145,435
Option 2	\$ 3,500,000	20 years	4.00%	\$ 254,512
Option 1	\$ 5,000,000	20 years	4.00%	\$ 363,588

Sanitary Sewer - *Projects*

2016 Loan Projects	Cost	Ammort..	Int.	Annual Cost
High School Main Line	\$ 200,000	20 years	4.00%	\$ 14,544

This project will provide a new Main Line to the High School. This will allow the high school's sewage to enter the treatment facility via the first lagoon, as it should. Currently the sewage is transferred directly from the High School property into the second lagoon. This short-circuits the treatment process and leads to higher pH and ammonia levels upon completion of the treatment.

This issue must be resolved in the very near future.

Sanitary Sewer - *Projects*

2016 Loan Projects	Cost	Ammort..	Int.	Annual Cost
Rake Screen	\$ 850,000	20 years	4.00%	\$ 61,810

The Rake Screen Project will need to be completed in 2017. This project consists of installing a new automated rake screen. The screen filters all of the wastewater before it enters the lagoons. The screen is currently cleaned manually everyday. This manual process requires extensive man hours + overtime on the weekends.

By automating this task, it would be completed more thoroughly without the need for overtime.

Sanitary Sewer Projects – *Expansion Options*

Expansion Options	Cost	Amortization	Interest	Annual Cost
Option 3 (High School, Full Throttle, Kick Start, Valley Implement)	\$ 2,000,000	20 years	4.00%	\$ 145,435
Option 2	\$ 3,500,000	20 years	4.00%	\$ 254,512
Option 1	\$ 5,000,000	20 years	4.00%	\$ 363,588

The last project is to expand our sewer system to the east. Through a previously approved Development Agreement, the City is required to extend sewer service to the east into the newly annexed areas surrounding the Kick Start and High School.

The annexation of these areas has already increased sales & property taxes as well as vending fee revenues. Option 3 is recommended.

Though this option allows for potential service to the previous Full Throttle site and Valley Implement location, it will only happen in the future, if those sites are annexed. *At this time, the City does not intend to force an annexation of these properties.*

Sanitary Sewer Projects – *Expansion Options*

Expansion Options	Cost	Amortization	Interest	Annual Cost
Rake Screen	\$ 850,000	20 years	4.00%	\$ 61,810
High School Main Line	\$ 200,000	20 years	4.00%	\$ 14,544
Option 3 (High School, Full Throttle, Kick Start, Valley Implement	\$ 2,000,000	20 years	4.00%	\$ 145,435
Total	\$ 3,050,000			

The anticipated cost of these three projects is \$3,050,000. This would require a traditional loan amortized over a 20-year period. This would result in new annual costs of \$221,789.

All of the remaining projects are recommended to be paid through a State Revolving Loan Fund Loan. Additionally, the state often awards grants to help reduce the total debt. Grants are based on the size of the project, the monthly utility rate and the level of competition from other cities applying for the grants.

Sanitary Sewer Projects – *Enhancements*

Lagoon Enhancements for Discharge Permit	\$ 5,000,000	20 years	4.00%	\$ 363,588
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Lagoon enhancements – The State Department of Environment and Natural Resources (DENR) continues to increase treatment standards. The City's current discharge permit application comments require additional treatment to reduce ammonia and nitrogen levels. The benefit of this required enhancement is that the City would have greatly enhanced capacity. The exact method of treatment has not yet been determined. The anticipated cost estimate from our Engineering Consultant is \$5,000,000 but could vary based on the new method used.



Sanitary Sewer Projects – *Enhancements*

The Slip Lining & Manholes Project will rectify an ongoing issue across a significant portion of our community. Much of the oldest portions of the community are serviced with clay sewer pipes which have exceeded their life expectancy. These lines are deteriorating resulting in cracks that allow subsurface water and tree roots to infiltrate the system. A significant portion of water being treated in our lagoons is actually groundwater. These issues can cause blockages resulting in an increased liability to the City. These issues also require additional maintenance from staff to jet the lines and cause additional costs to homeowners.

The proposed project would line the old main lines and line the old man holes. This will reduce the chances of infiltration and blockages.



Sanitary Sewer Projects – *Enhancements*

Slip Lining and Man Holes	\$ 1,500,000	20 years	4.00%	\$ 109,070
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The anticipated cost of these two projects is \$6,500,000. This would require a State Revolving Loan amortized over a 20-year period. Though the City will be seeking grants, it is assumed that a conservative interest rate and no grant funding would result in a new annual cost of \$472,658.



Sanitary Sewer Projects – *Financing*

The current utility rates include sufficient revenue to provide for the financing of a significant portion of the improvements.

2017 Waste Water Fund Revenue Available for New Debt Service	
New Loan Line Item	\$ 210,888
Capital Reserves	\$ 209,425
2016 Revenue available for new Debt Service	\$ 420,313

Sanitary Sewer Projects – *Financing*

However, the complete retrofitting of the wastewater system will require an increase in monthly sewer rates. This will be tempered however in future years with a growing number of customers.

2017 Revenue available for Debt Service	\$ 420,313
Total Annual Cost of Upgrades	\$ 694,447
Remaining funds required	\$ (274,134)
3500 Customer Units Monthly Price Increase Needed	\$ 6.53

With a growth rate of at least 1% per year, the growth in revenue should nearly cover the variable cost increases (personnel, utilities, supplies). This will be further enhanced when the existing Waste Water Bond is repaid in 2020. Starting in 2021, there will be an annual savings of approximately \$160,000.

THE WATER FUND

Revenue in this fund originates from the City's Water Utility Charges. The funds are used to cover existing debt, operating costs (water operators & utility billing staff, insurance, electrical costs of the wells and repairs) and capital costs.



Water Fund – *Current Financial Standing*

The Water Fund ended 2015 in a very strong financial position:

Cash & Deposits	\$ 844,157
Other Investments	\$ 1,503,000
Main Street Mainline Replacement Savings	(\$ 440,000)
Development Agreements Obligations	(\$ 200,000)
Customer Deposits	(\$ 180,000)
December 31, 2015 Fund Equity	\$ 1,527,157

Water Fund – *Current Financial Standing*

In the 2016 Budget, there are five significant sources of water service charges:

Charge	B2016 Total Revenue
Water Base & Usage (4,000 gals.)	\$ 1,192,258
Surcharge #1 (Murray Add.)	\$ 69,185
Surcharge #2 (RD Projects)	\$ 163,553
Lazelle Surcharge	\$ 165,337
Water Availability Fee	\$ 35,700
All Other	\$ 131,200
Total	\$ 1,758,815

Water Fund – *Current Financial Standing*

From this revenue the following expenses are paid:

Category	B2016 Total Expense
Operating (personnel, utilities, insurance, supplies, repairs)	\$ 965,929
Capital Projects	\$ 319,757
Meter and Radio Remote Replacements	\$ 111,000
Existing Debt	\$ 362,129
Total	\$ 1,758,815

Water Fund – *Completed Project & Priority Future Projects*

Over the past five years, the Water Department has completed numerous, significant, capital projects which have greatly enhanced the reliability and quality of service.

- Construction of new well
- Rehabilitation of another well
- Installation of a new water main along Lazelle
- Installation of several blocks of new main lines in residential neighborhoods

With the completion of these improvements and the pending completion of the Main Street mainline replacement, the community's wells and mains are in excellent condition.



Water Fund – *Completed Project & Priority Future Projects*

In order to continue improving our water system, we need to make annual investments in our water mains.

The Municipal Utility Board has recommended an annual investment to replace one to two blocks of the oldest lines in our community or to install a new line in locations where there are substantial lengths of privately owned service lines. The benefits of replacing these lines is to reduce the likelihood of a mainline leak and to reduce the cost of individual property owners when a service line needs to be replaced.

The private property owner is financially responsible for each service line from their house to the water main. In several of the oldest portions of our community, the previous private water utilities reduced their corporate costs by limiting the number of water mains and thereby increasing the length of private service lines to connect the house to the water main.

Water Fund – *Priority Future Projects*

Streets without Water Mains			
Shephard Street	Junction to Howard	1	Blocks
Dakota	Pine to Cedar	2	Blocks
Park Ave	9th to 10th St.	1	Blocks
7th	Main to Williams	3	Blocks
9th	Main to Lazelle	1	Blocks
2nd	Main to Lazelle	1	Blocks
4th	Main to Lazelle	1	Blocks
	Fleet St	1	Blocks
	TOTAL BLOCKS NO MAINS	11	

Water Fund – *Priority Future Projects*

Streets with 4" Cast Iron Water Mains			
William St	10th- 8th	1000	Feet
Park Ave	9th-8th	400	Feet
8th	William-Park	400	Feet
9th	Park-Lazelle	400	Feet
8th	Lazelle-Main	390	Feet
Sherman	Main-9th	230	Feet
9th	Sherman-Alley	550	Feet
Alley near Hill St	9th-10th	320	Feet
5th	Lazelle-Main	380	Feet
Willard	4th-3rd	210	Feet
Farley	4th-3rd	370	Feet
4th	Farley-Church	390	Feet
3rd	Douglas-Edmunds	900	Feet

Water Fund – *Priority Future Projects*

Streets with 4" Cast Iron Water Mains			
2nd	Douglas-Boulevard	1450	Feet
Edmunds	2nd-Pine St	750	Feet
Boulevard	2nd-Pine St	700	Feet
Sherman	Junction-Channel	970	Feet
Sly St.	Lazelle-Dudley	300	Feet
Davenport	Howard-Deadwood	2100	Feet
Fulton	Douglas-Edmunds	740	Feet
Nellie	Lazelle-Weber Dr	2180	Feet
Blanch	Main-Sherman	350	Feet
Main	Blanche-Flora	650	Feet
Weber Dr	Nellie-Nellie	1390	Feet
Tilford	Fulton-Baldwin	350	Feet
Baldwin	Tilford-Deadwood	350	Feet

Water Fund – *Priority Future Projects*

Streets with 4" Cast Iron Water Mains			
S. Fulton	Glover-Celia	780	Feet
Deadwood	Spruce-Pine St	370	Feet
Deadwood	Junction-Davenport	300	Feet
Vanocker Dr	Ponderosa-1st Ave	900	Feet
Ponderosa Dr	Pine Tree St-Greenwood Trail	950	Feet
Pine Tree St	Evergreen-Ponderosa Dr	430	Feet
Greenwood Trail	West End-North End	1700	Feet
	TOTAL FEET CAST IRON	23650	

This comprehensive list will take years to complete, however it includes all the long term projects needed to complete the installation or rehabilitation of the City's mainlines.

Note – There is no indication that there are failures along these lines. This list is a proactive list meant to help enhance the long-term viability of our water delivery system.

Water Fund – *Priority Future Projects*

The Municipal Water Board (MUB) has completed two projects to date that included installing a new water main to reduce the length of service lines. The average cost of each of these projects was \$276,000. The MUB recommends this strategy continue through the foreseeable future.

The MUB also recommends the Council complete one such project annually and pay for the project through the current revenues received each year.



Water Fund – *Water Meters*

The City anticipates a future growth rate of 1% annually which equates to \$10,500 for new water meters and accompanying radio remotes. 35 new accounts x (\$150 new meter + \$150 radio remote).

Use of the radio remote greatly reduces the time required to complete the monthly reading. Once the entire community is upgraded to remote reading, the current 80 hours per month required for reading will be reduced to 16 hours per month.

The 2016 Budget includes funding for 335 replacement meters & remotes. This equates to 30 meter replacements each month. This was done due to the age and life expectancy of the majority of meters in our community.

The first 50 meters replaced in 2016 were tested, resulting in a 4% failure rate (recorded less water than was actually used). This is approximately the same failure rate as the new meters. Due to these test results, it is recommended that the replacement program be re-examined each year. Once a 15% failure rate occurs, the City will begin replacing the meters at a rate of 335 per year.

Water Fund – Water Meters cont.

In years when meters are not requiring replacement, it is recommended that the radio remotes continue to be installed at a rate of 335 per year. The yearly average for meter replacement due to malfunction (not including a meter replacement program) is 70 replacements per year. If this recommendation is agreed upon, there will remain 215 meters per year that will not need to be purchased.

At a cost of \$150 per meter, this is a savings of \$32,250 per year.



Water Fund – *Water Meters cont.*

The 2016 Water Budget includes a total of \$319,756 in capital projects and \$111,000 in meter and radio remote upgrades and installations. For the past three budget years, the Water Fund has been required to save a significant sum to contribute to its share of the Main Street Project. With the conclusion of 2016, the total funds needed for this project will have been saved.

With the analysis provided previously, we anticipate the following annual capital costs:

Project	Total Cost
New Water Main Installation	\$ 276,000
35 New Accounts (radios & meters)	\$ 10,500
120 Meter replacements	\$ 18,000
335 Radio Remotes	\$ 50,250
Total	\$ 354,750

Water Fund – Water Meters cont.

Given the 2016 budgeted expenditures for Capital Improvements, Capital Appreciation (savings) and meter & radio remotes, totaling \$430,756 there is an anticipated surplus of \$76,006 per year. This, however, is contingent upon the actual cost of each mainline project and the continued superb performance of the existing water meters.



Water Fund – *Analysis of Future Rates*

With new developments in Sturgis, we anticipate additional revenue growth each year without any new charges to our rate payers.

In 2014, we had a total of 3,531 units. In 2015, the City grew by more than 40 new units, representing a growth rate of more than 1%.

With the addition of Dolan Creek Subdivision, Canyon View Estates and other commercial developments, a continued 1% growth rate is conservative. This growth rate is anticipated to cause an increase in revenue for the Water Base and Usage fees, as well as the surcharge fees for a combined total of \$15,903.



Water Fund – *Analysis of Future Rates*

Despite anticipated growth in these revenue streams, the inflationary increase in expenses should be minimal since 20% of all expenses are existing debt.

Operating costs remain the sole expense anticipated to increase due to inflation. A 3% annual inflationary increase will lead to an additional anticipated cost of \$28,978. (This increase will still be offset by the increased revenue from growth.)

This leaves an anticipated annual gap of \$13,075. Given a total fund budget of \$1,758,815 this is a relatively small figure.

Current water rates are anticipated to remain stable with minor annual inflationary adjustments for some time until one of the following occurs:

- 1. Inflationary operational cost increases erode the annual fund surplus*
- 2. The Water Meter Replacement Program detects failures requiring more than 50 new meters per year to be installed.*
- 3. The system develops significant well, tank or mainline failures exceed the Fund's reserves (in excess of \$1,500,000).*

Water Fund – *Additional Services*

With the Water Fund remaining in a very strong financial position and several capital enhancements already budgeted to be completed in the years to come, it is recommended that a new service be provided with the anticipated annual surplus of \$76,006.

For several years, the Council has heard numerous requests from neighborhoods throughout the community to make storm water improvements. It is important to note that all new developments are required to meet flood requirements for a 100-year flood event.

Current inadequacies should not be exacerbated as the community grows. However, much of our existing community was built with little to no storm water improvements, therefore improvements to the existing neighborhoods must be made.



Water Fund – *Additional Services*

Over the past three years the City has begun to make the first storm water improvements in its history.

This began in 2014 with an approximate three block area around Middle Street north of Lazelle. This project was funded through an investment made by the Capital Improvement Fund.

This year, a significant storm water channel will be constructed north of Anna Street to Harmon Street. This project is being funded through the Scott Peterson Motors TIF and the Capital Improvement Fund.

The aforementioned proposed Capital Improvement Fund debt projects include \$500,000 for additional storm water projects in the Murray Addition and First Avenue neighborhoods.



Water Fund – *Additional Services*

Though some projects have begun and a few additional projects have been identified, there remains a significant need to provide for an ongoing annual funding stream for both manpower and projects to enhance the storm water infrastructure of our community.

It is recommended that the anticipated \$76,000 in surplus Water Fund revenue be used to begin meeting this demand. It is recommended that the Council choose one of two options.



Water Fund – *Additional Services*

Option #1

Approximately \$40,000 could be used to fund a new full-time operator position (wages and benefits) in the Sanitary Sewer Division.

This would fund 2,080 hours each year for the cleaning of storm drains, reshaping of storm drainage ways, repairs of culverts and other storm water facilities and MS4 compliance (state mandated storm water improvements which are completed very minimally now).

The remaining \$30,000 could be used to help fund minor storm water projects (minor culverts, etc.).



Water Fund – *Additional Services*

Option #2

The second option would be to use the \$76,000 per year to hire an independent contractor to complete specific storm water projects each year (maintenance of waterways, reshaping ditches, cleaning culverts).

Whichever option is chosen, it would not fix all of the community's storm water needs. However, it would begin to systematically address these issues for the first time, which would be a substantial improvement.

It is worth noting that this would be accomplished without raising existing fees or without instituting a new fee (which is what other communities in the Black Hills have been required to put into place). If this pilot project is successful, in future years, the Council could decide if it should be enhanced either through reprioritizing the projects funded through the Capital Improvement Fund or through utility fees.

Anticipated Project Scheduling

Roofs Library and Auditorium	2016
Community Center Pool Rehabilitation	2016
Community Center Gym Floor Resurfacing and Lobby Painting	2016
Anna Street Drainage Improvements	2016
Willow Park Playground Equipment	2016
Main Street Reconstruction	2016, 2017
Waste Water Automatic Rake and Screen	2016, 2017
Main Street Reconstruction	2016, 2017
Softball Field Irrigation	2016, 2017, 2018
Community Center Equipment	2016, 2018, 2019, 2020
Storm Water Enhancements (Murray and 1 st Avenue)	2017
Community Center Pool Pack Venting System	2017
City Hall Remodel	2017
Parks Building	2017

Waste Water Extensions	2017
Waste Water High School Main	2017
Old Stone Shelter Reconstruction	2017
Girls Softball Sidewalks	2017, 2018
Waste Water Main Line slip lining	2017, 2018
Waste Water Man Hole rehabilitation	2017, 2018
Waste Water Lagoon Enhancements	2017, 2018
Sport Facilities ADA Enhancements	2017, 2019, 2020
Roadway Resurfacing	2017, 2018, 2019, 2020
Soccer Concessions, Restrooms	2018
Otter Road Reconstruction	2018
Public Works Building	2018
Downtown Iconic Feature/Enhancements	2018
9 th Street Bridge Replacement	2018
Cemetery Cremain Section Enhancements	2018
Tennis Courts Resurfacing	2019
Lions Club Park Reconstruction	2019, 2020
City Park House Purchases	2019

Comparison of Black Hills Communities' Relative Cost of Living

	City Tax	School Tax	County Tax	Other Tax	Sewer	Water	Garbage	Annual Total
Belle Fourche	947	1,376	653	19	245	207	269	3,717
Spearfish	431	2,015	645	11	425	181	210	3,918
Sturgis (proposed)	1,089	1,322	632	-	389	358	150	3,940
Deadwood	750	1,885	645	129	276	246	162	4,093
Lead	1,378	1,885	645	243	276	300	162	4,889
Hot Springs	1,067	2,023	775	268	342	209	152	4,834
Rapid City	630	2,046	723	1,158	356	211	202	5,326
Taxes based on a \$150,000 assessed single family house								